

IN THE CLAIMS:

Please cancel Claims 2, 3, 5 and 14-23 without prejudice to or disclaimer of the subject matter contained therein, and please add new claims 24-42.

1. (Amended) A light device comprising:

a light source;

a concave reflector;

a lens projection system; and

a collecting lens between said light source and said reflector;

said light source, reflector and lens system being substantially aligned relative to an optical axis such that a light beam emitting from said device is collimated into a substantially parallel light beam having a diameter less than the diameter of said reflector; and

a collecting lens between said light source and said reflector.

2. (Cancel)

3. (Cancel)

4. (Original) A light source as set forth in Claim 1, wherein said collecting lens is a biconvex lens.

5. (Cancel)

6. (Original) A light source as set forth in Claim 1, wherein said light source is located substantially at a focal point of said reflector.

7. (Amended) A light source as set forth in Claim 1, wherein said collecting lens has a focal length of l_1 and said reflector has a focal length l_2 between about 1.25 and about 2.0 times the focal length, l_2 , of said reflector, where $1.25l_1 \leq l_2 \leq 2.0l_1$.

8. (Amended) A light source as set forth in Claim 1, wherein said collecting lens is disposed a distance d_1 , from said source relative to said optical axis and said reflector is disposed a distance d_2 from said source relative to said optical axis, where $d_1 \geq \frac{1}{2}d_2$.

9. (Original) A light source as set forth in Claim 1, wherein said reflector has a focal length, l , and said collecting lens is disposed at a distance, d , from said reflector relative to said

optical axis, where $0.25l \leq d \leq 0.5l$.

10. (Original) A light source as set forth in Claim 1, where a diameter of said collecting lens is at least as great as a diameter of said reflector.

11. (Original) A light source as set forth in Claim 1, wherein said collecting lens is movable along said optical axis relative to said light source and said reflector.

12. (Original) A light source as set forth in Claim 1, further comprising a diaphragm disposed between said source and said lens projection system.

13. (Original) A light source as set forth in Claim 12, wherein said diaphragm has an aperture dimensioned to minimize transmission of unreflected light along said optical axis towards said lens projection system, where said unreflected light is light transmitted directly from said source free from reflection by said reflector.

24. (New) A light device comprising:

a light source;

a concave reflector;

a lens projection system;

said light source, reflector and lens system being substantially aligned relative to an optical axis; and

a collecting lens between said light source and said reflector, wherein said collecting lens is movable along said optical axis relative to said light source and said reflector.

25. (New) A light source as set forth in Claim 24, wherein said collecting lens is a biconvex lens.

26. (New) A light source as set forth in Claim 24, wherein said reflector has a focal length, l , and said lens projection system and said reflector are separated by a distance, d , where $d \geq 1.5l$.

27. (New) A light source as set forth in Claim 24, wherein said collecting lens has a focal length of l_1 and said reflector has a focal length l_2 , where $1.25l \leq l_2 \leq 2.0l_1$.

28. (New) A light source as set forth in Claim 24, wherein said collecting lens is disposed a distance d , from said source relative to said optical axis and said reflector is disposed a distance d_2 from said source relative to said optical axis, where $d_1 \geq \frac{1}{2}d_2$.

29. (New) A light source as set forth in Claim 24, wherein said reflector has a focal length, l , and said collecting lens is disposed at a distance, d , from said reflector relative to said optical axis, where $0.25l \leq d \leq 0.5l$.

30. (New) A light device comprising:
a light source;
a concave reflector;
a lens projection system;
said light source, reflector and lens system being substantially aligned relative to an optical axis; and

a collecting lens between said light source and said reflector, wherein said collecting lens is disposed a distance d_1 , from said source relative to said optical axis and said reflector is disposed a distance d_2 from said source relative to said optical axis, where $d_1 \geq \frac{1}{2}d_2$.

31. (New) A light source as set forth in Claim 30, wherein said collecting lens has a focal length of l_1 and said reflector has a focal length l_2 , where $1.25 l_2 \leq l_1 \leq 2.0 l_2$.

32. (New) A light source as set forth in Claim 30, wherein said reflector has a focal length, l_2 , and said lens projection system and said reflector are separated by a distance, d_3 , where $d_3 \geq 1.5 l_2$.

33. (New) A light source as set forth in Claim 30, wherein said reflector has a focal length, l_2 , and said collecting lens is disposed at said distance, d_4 , from said reflector relative to said optical axis, where $0.25 l_2 \leq d_4 \leq 0.5 l_2$.

34. (New) A light device comprising:
a light source;
a concave reflector having a focal length, l ;
a lens projection system;
said light source, reflector and lens system being substantially aligned relative to an optical axis; and

a collecting lens disposed at a distance, d_1 , from said reflector relative to said optical axis, where $0.25 l \leq d_1 \leq 0.5 l$, and wherein said collecting lens is disposed between said light source and said reflector.

35. (New) A light source as set forth in Claim 34, wherein said lens projection system and said reflector are separated by a distance, d_2 , where $d_2 \geq 1.5l$.

36. (New) A light source as set forth in Claim 34, wherein said collecting lens has a focal length of l_1 , where $1.25 l \leq l_1 \leq 2.0 l$.

37. (New) A light source as set forth in Claim 34, wherein said collecting lens is disposed a distance d_3 , from said source relative to said optical axis and said reflector is disposed a distance d_4 from said source relative to said optical axis, where $d_3 \geq 0.5 d_4$.

38. (New) A light device comprising:

a light source;

a concave reflector having a focal length of l_1 ;

a lens projection system;

said light source, reflector and lens system being substantially aligned relative to an optical axis; and

a collecting lens between said light source and said reflector, said collecting lens having a focal length of l_2 between about 1.25 and about 2.0 times the focal length l_1 of said reflector.

39. (New) A light source as set forth in Claim 38, wherein said lens projection system and said reflector are separated by a distance, d_1 , where $d_1 \geq 1.5l_1$.

40. (New) A light source as set forth in Claim 38, wherein said light source is located substantially at a focal point of said reflector.

41. (New) A light source as set forth in Claim 38, wherein said collecting lens is disposed a distance d_2 , from said source relative to said optical axis and said reflector is disposed a distance d_3 from said source relative to said optical axis, where $d_2 \geq 0.5 d_3$.

42. (New) A light source as set forth in Claim 38, wherein said collecting lens is disposed at a distance, d_4 , from said reflector relative to said optical axis, where $0.25 l_1 \leq d_4 \leq 0.5 l_1$.